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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/678,374	10/03/2003	Peter J. Pupalaikis	455610-2600.1	4020
20999	7590	03/28/2006	EXAMINER	
FROMMER LAWRENCE & HAUG 745 FIFTH AVENUE- 10TH FL. NEW YORK, NY 10151			TSAI, CAROL S W	
			ART UNIT	PAPER NUMBER
			2857	
DATE MAILED: 03/28/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

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W/678374

APPLICATION NO./ CONTROL NO.	FILING DATE	FIRST NAMED INVENTOR / PATENT IN REEXAMINATION	ATTORNEY DOCKET NO.
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EXAMINER

ART UNIT	PAPER
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20060320

DATE MAILED:

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner for Patents

The information disclosure statement (IDS) submitted on September 22, 2005 was filed after the mailing date of the Allowance on August 15, 2005. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

The drawings filed on October 28, 2005 are accepted by the Examiner.

Carol S.W. Tsai
CAROL S.W. TSAI
PRIMARY EXAMINER

Response to Rule 312 Communication	Application No.	Applicant(s)	
	10/678,374	PUPALAIKIS ET AL.	
	Examiner	Art Unit	
	Carol S. Tsai	2857	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

1. ☒ The amendment filed on 28 October 2005 under 37 CFR 1.312 has been considered, and has been:

a) ☐ entered.

b) ☒ entered as directed to matters of form not affecting the scope of the invention.

c) ☐ disapproved because the amendment was filed after the payment of the issue fee.

Any amendment filed after the date the issue fee is paid must be accompanied by a petition under 37 CFR 1.313(c)(1) and the required fee to withdraw the application from issue.

d) ☐ disapproved. See explanation below.

e) ☐ entered in part. See explanation below.



CAROL S.W. TSAI
PRIMARY EXAMINER



REPLACEMENT SHEET

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FIG. 2

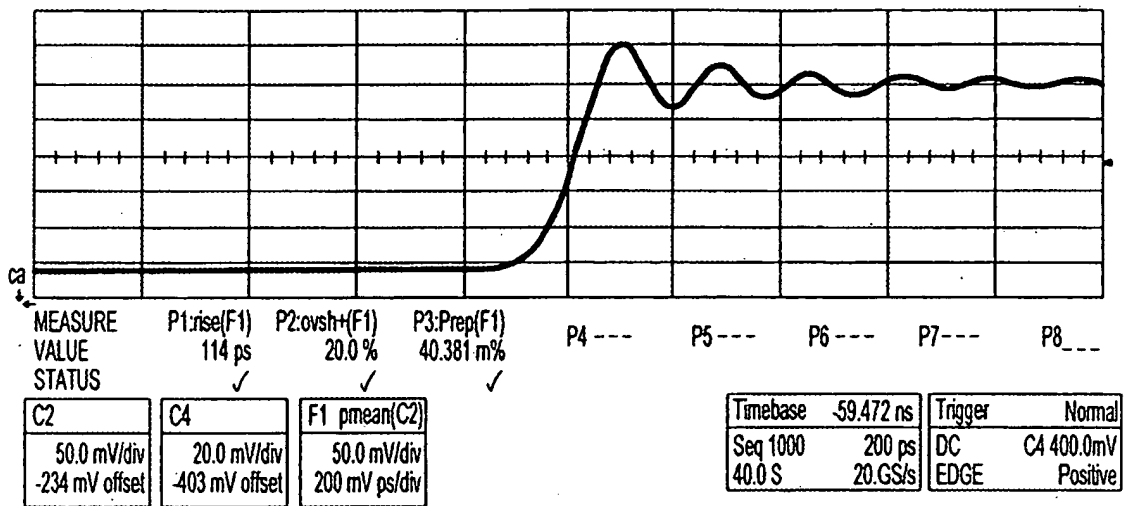


FIG. 3

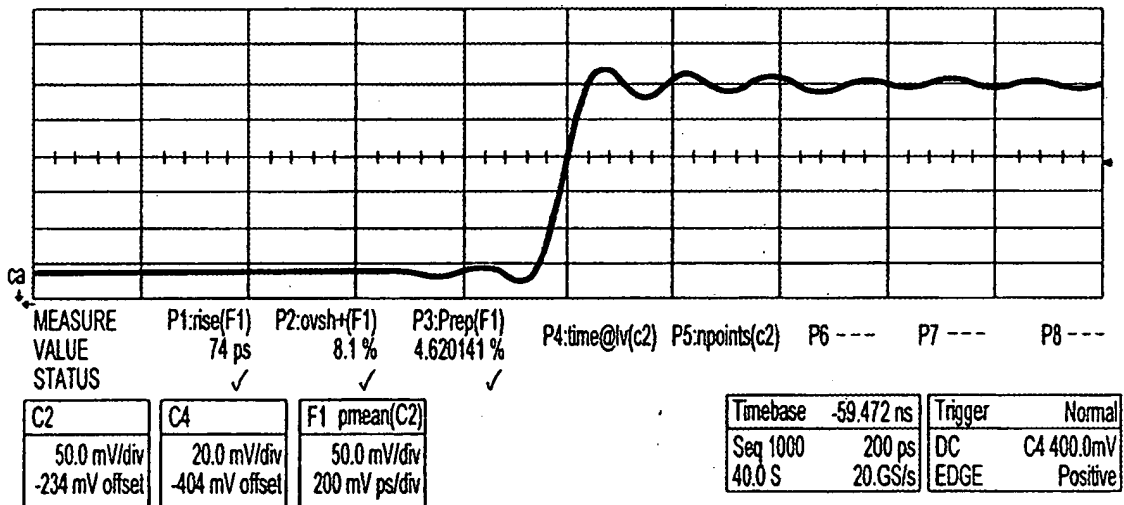


FIG. 4

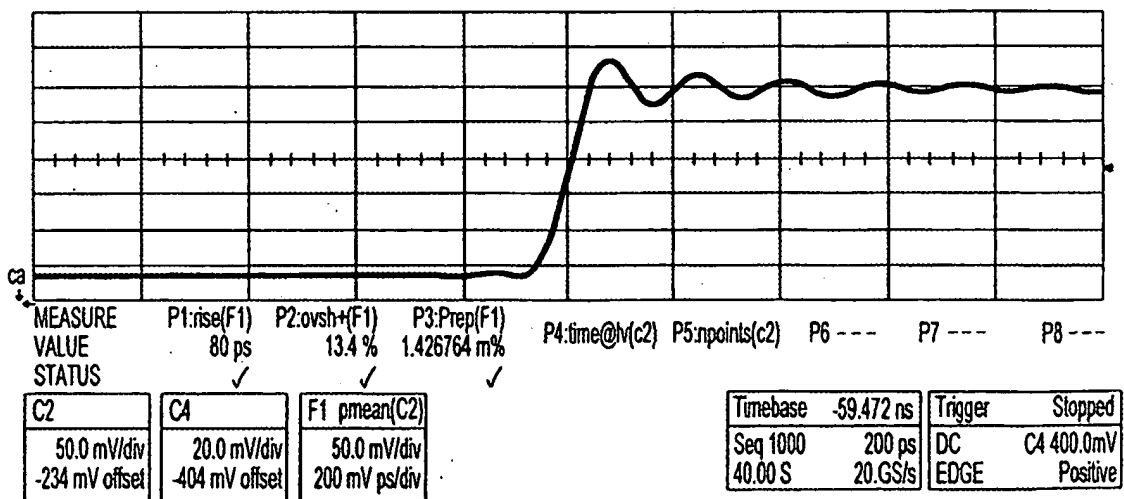


FIG. 5

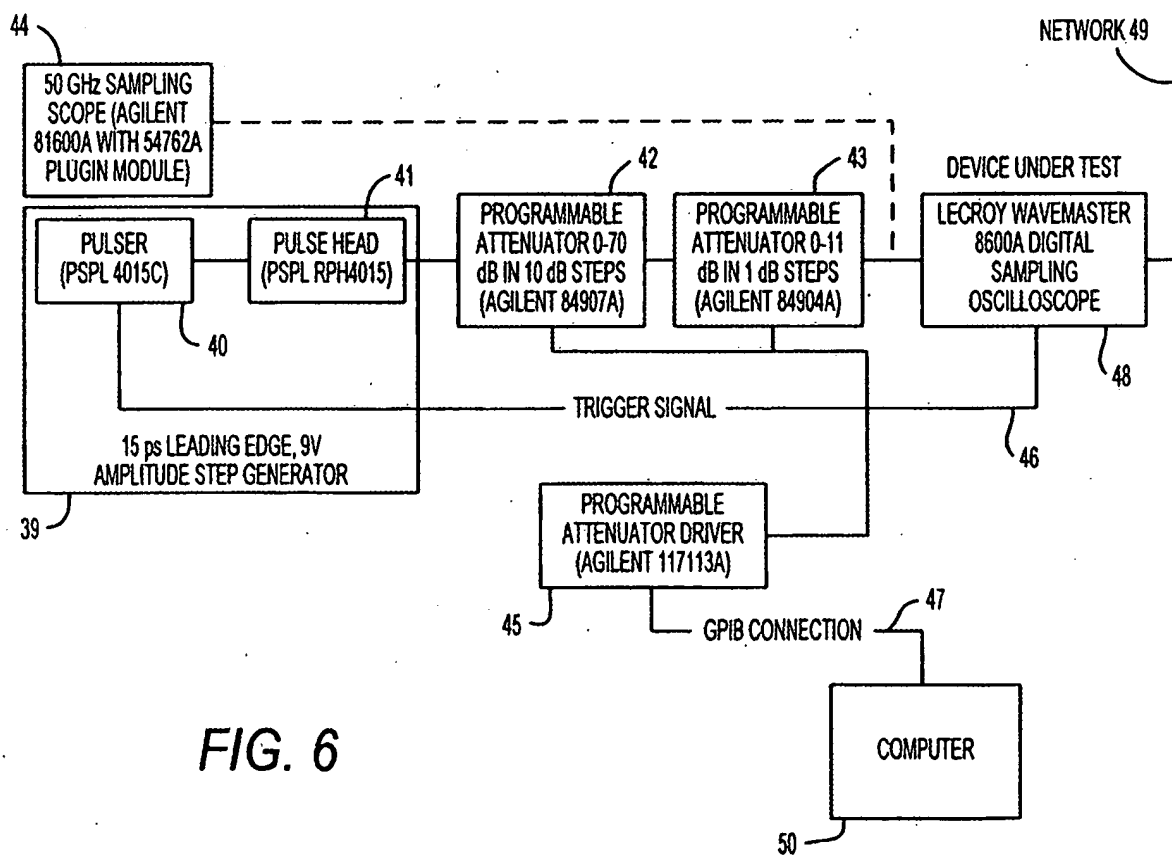
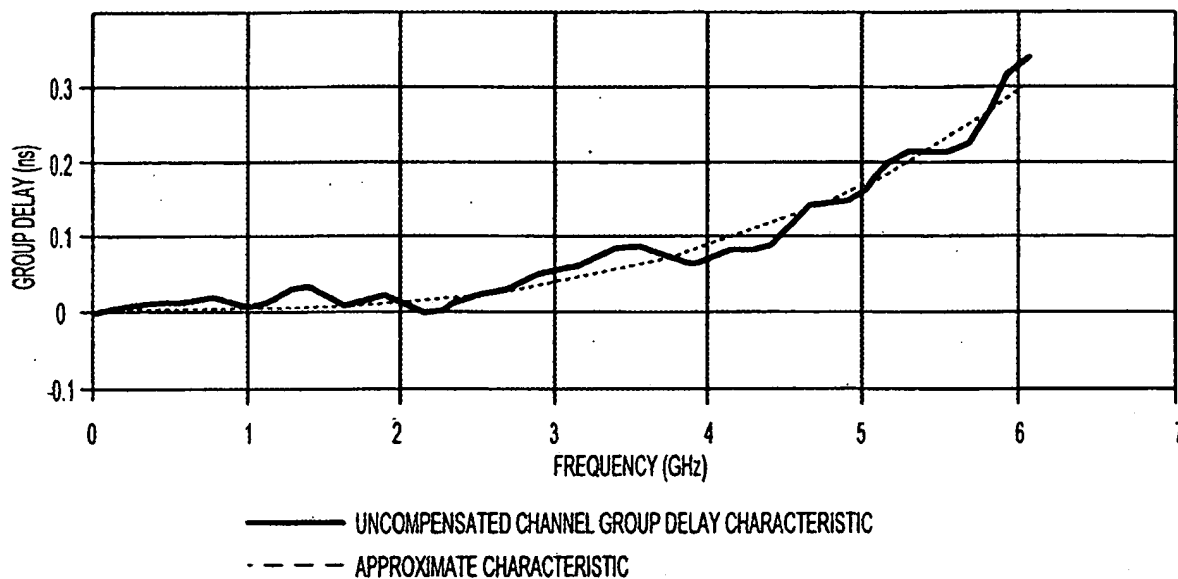


FIG. 6

FIG. 7

DIALOG

RESPONSE ADVANCE GROUPDELA... GROUPDELAYO... SELFTEST

GROUP DELAY COMPENSATION

ALLOWED ☒

ENABLE ☒

VERNIER 1.00

VERNIER IN USE 720e-3

FREQUENCY POINTS 50

MAX FREQUENCY 6.3

MAX PHASE DELTA 30

TRY HARD TO FIT COMPENSATOR ☐

DEGREE OF COMPENSATION 3

TOLERANCE (ns) 0e-6

MAX ITERATIONS ALLOWED 30

MAXIMUM DELAY 1.0

ALPHA 1.5

APPROXIMATE ☒

AUTO DETERMINE POWER ☐

APPROXIMATE POWER 3.0

APPROXIMATE POWER IN USE 3.000000

EVALUATION

EVALUATE FILTERS ☒

ACTUAL INPUT EDGE 50.0e-3

CALCULATED RISETIME (ns) 83.8e3

CALCULATED OVERSHOOT (%) 12.250

CALCULATED PRESHOOT (%) 1.4063

CALCULATED TOP 266.8e-8

CALCULATED BASE -500e-8

OVERALL SCORE 97.58

☒ R ☒ W ☒ O SAVE

LOAD SAVED SETTINGS

CLOSE

FIG. 8

DIALOG

RESPONSE ADVANCE GROUPDELAY GROUPDELAYOPT SELFTEST

FUZZY RULE BASE

OVERSHOOT L PRESHOOT

	L	M	H
RISETIME L	Ap	AA	CC
M	Am	Bp	Cm
H	Dp	Dm	DD

OVERSHOOT M PRESHOOT

	L	M	H
RISETIME L	Ap	AA	CC
M	Am	Bp	Cm
H	Dp	Dm	DD

OVERSHOOT H PRESHOOT

	L	M	H
RISETIME L	AA	Am	Cm
M	Bp	BB	Dp
H	DD	FF	FF

FUZZY MEMBERSHIP

OVERSHOOT (%) L M H

15	20	25
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PRESHOOT (%) L M H

500e-3	2.0	3.0
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RISETIME (ns) L M H

76e-3	82e-3	89e-3
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RISETIME ARE SPECIFIED FOR

BANDWIDTH 6.0

INPUT EDGE SPEED 35e-3

PRESHOOT MEASUREMENT SETTINGS

HYSTERESIS (%) 250e-3

APERTURE (ns) 1.0

INTERCEPT FACTOR 4.0

OPTIMIZATION STRATEGY

OPTIMIZE FILTERS ☒

TOP SCORES 4

POWER

START 2.0

END 4.0

GRID 200e-3

SCAN 1.0

VERNIER

START 300e-3

END 1.00

GRID 20e-3

SCAN 100e-3

FULL SEARCH ☐

DEBUG INFO ☐

SAVE

LOAD SAVED SETTINGS

CLOSE

REPLACEMENT SHEET

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1	for n=0 ...N	FOR EACH RESPONSE POINT
2	$R_n = \text{GD}_{\text{comprel}}(f_n, g_{i-1}) + \text{gd}_{\text{spec}}_n$	CALCULATE A RESIDUAL
3	for j=0 ...2S-1	FOR EACH COEFFICIENT
4	$J_{n,j} = \frac{\partial}{\partial (g_{i-1})_j} \text{GD}_{\text{comprel}}(f_n, g_{i-1})$	CALCULATE AN ELEMENT OF THE JACOBIAN MATRIX
5	$H = J^T \cdot W \cdot J$	CALCULATE THE APROXIMATE HESSIAN MATRIX
6	for j=0 ...2S-1	GENERATE A MATRIX WHOSE DIAGONAL IS IDENTICAL TO THE HESSIAN MATRIX AND IS ZERO ELSEWHERE
7	$D_{jj} = H_{jj}$	
8	$\Delta P = (H + \lambda \cdot D)^{-1} \cdot J^T \cdot W \cdot R$	CALCULATE THE CHANGE TO THE COEFFICIENT VALUES
9	$g_i = g_{i-1} + \Delta P$	APPLY THE CHANGE TO THE COEFFICIENTS
10	$\text{mse}_i = \frac{1}{N+1} \cdot \sum_n (\text{gd}_{\text{spec}}_n + \text{GD}_{\text{comprel}}(f_n, g_{i-1}))^2$	CALCULATE THE NEW MEAN SQUARED ERROR
11	<div> <div>true</div> <div>$\text{mse}_i > \text{mse}_{i-1}$</div> <div>false</div> </div>	DID THE MEAN SQUARED ERROR INCREASE ?
12	<div> <div>$\lambda = \lambda \cdot 10$</div> <div>FAVOR STEEPEST DECENT</div> <div>$\lambda = \frac{\lambda}{10}$</div> <div>FAVOR NETWORK GAUSS CONVERGENCE</div> </div>	

FIG. 9

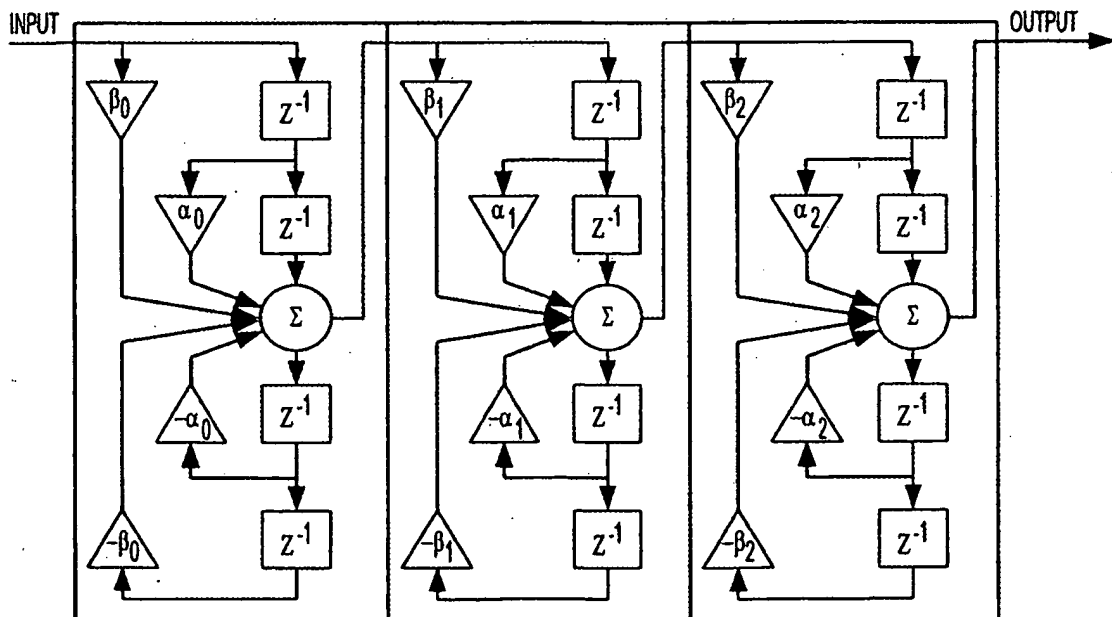


FIG. 10

REPLACEMENT SHEET

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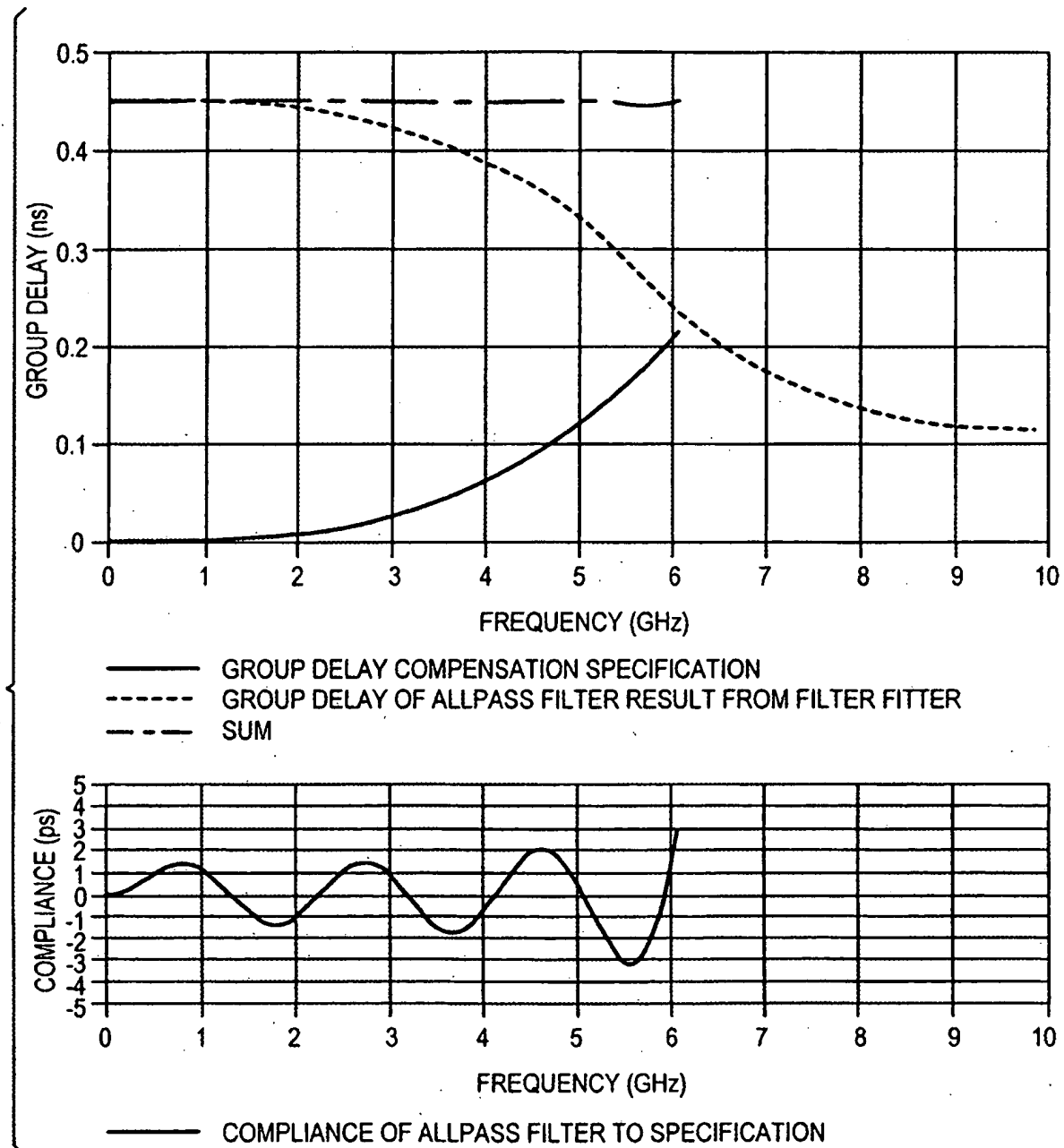


FIG. 11

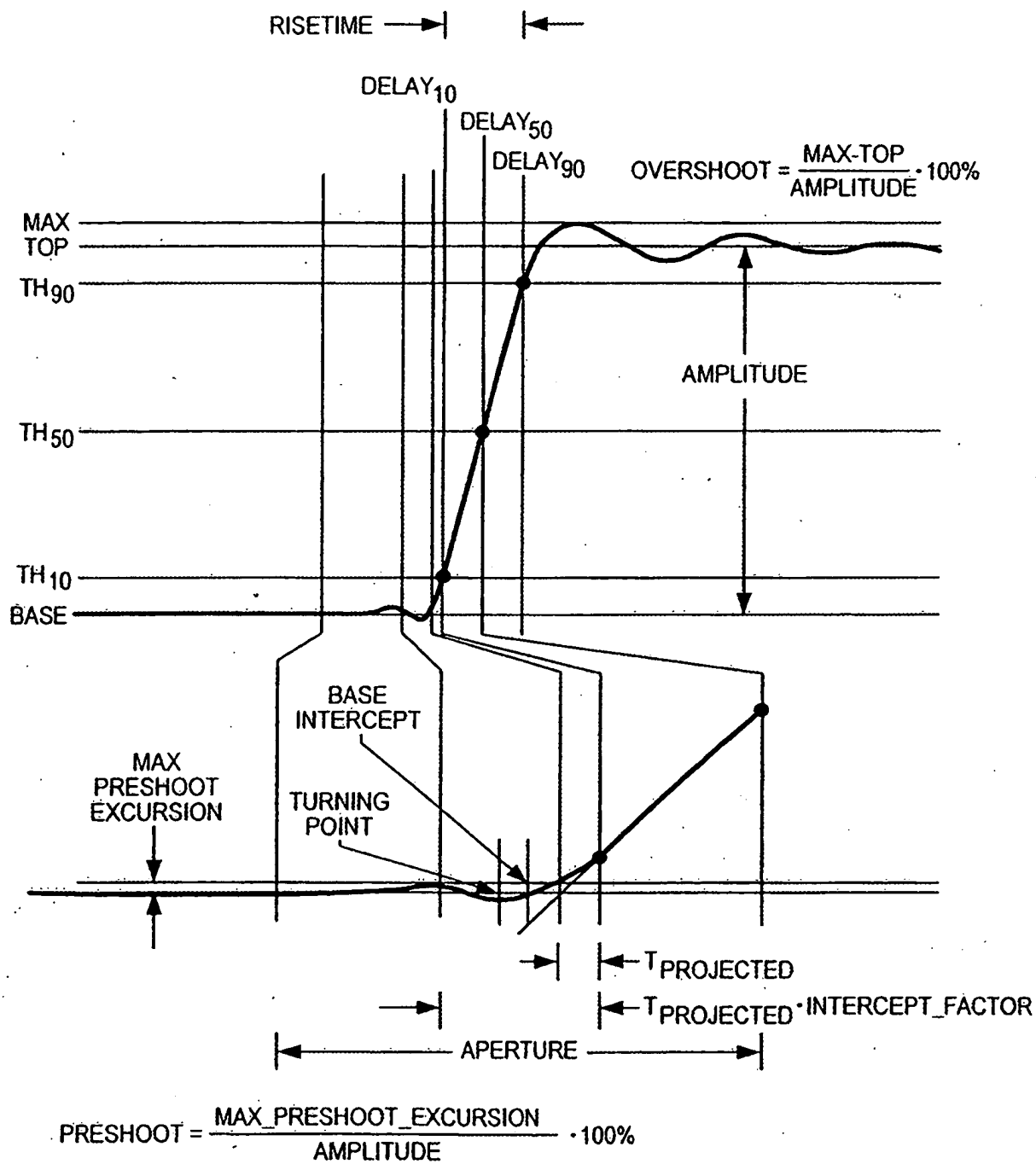


FIG. 12

REPLACEMENT SHEET

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FIG. 13

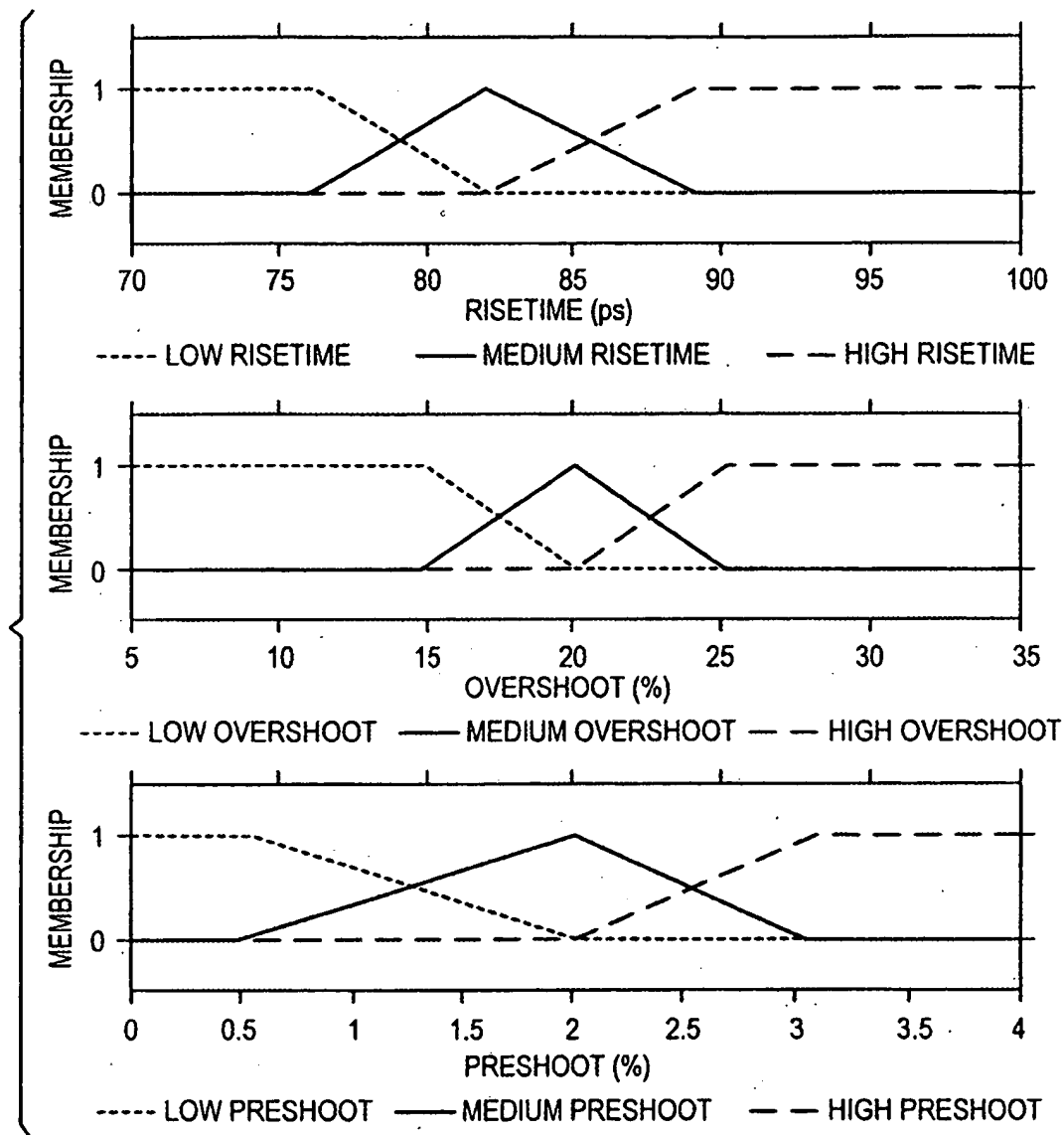
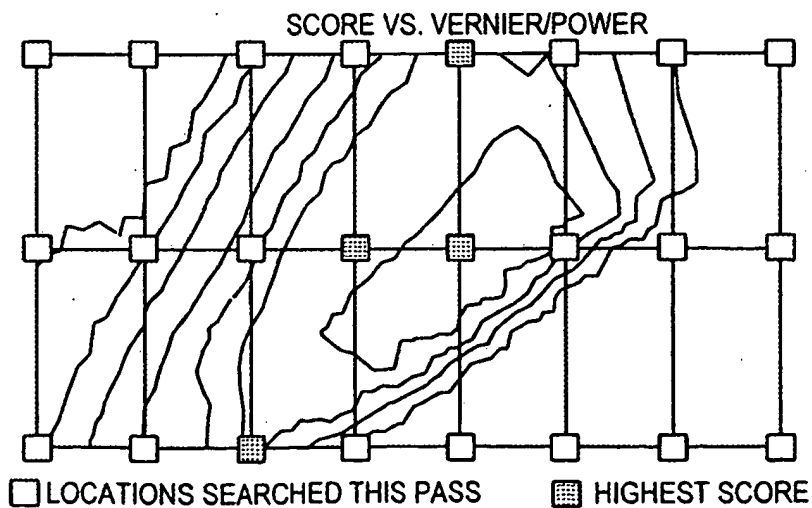


FIG. 14



REPLACEMENT SHEET

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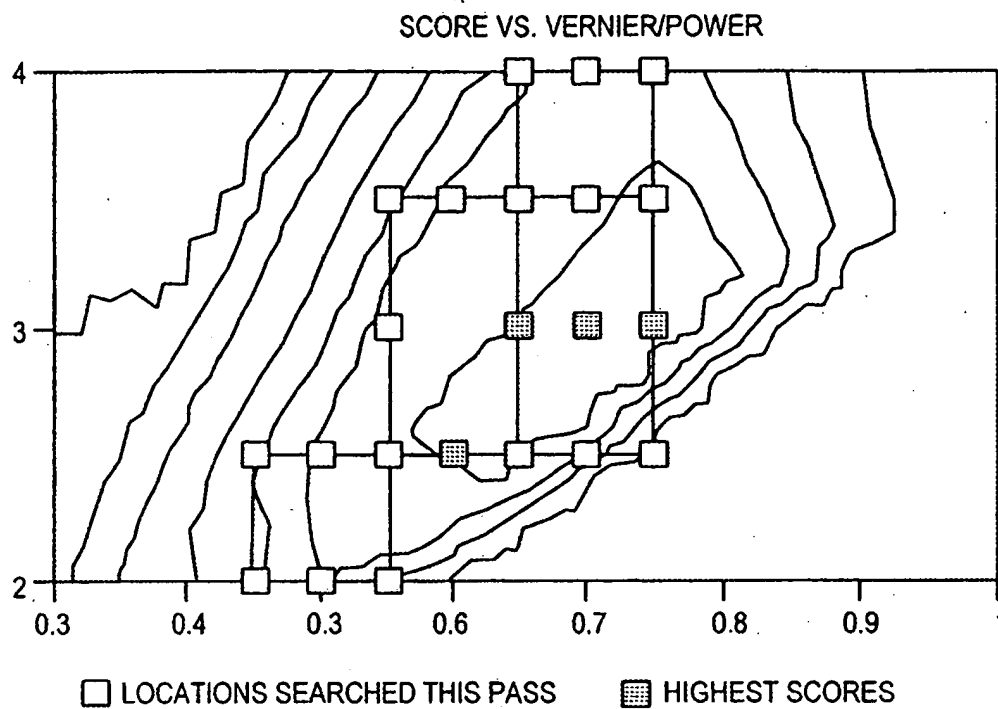


FIG. 15

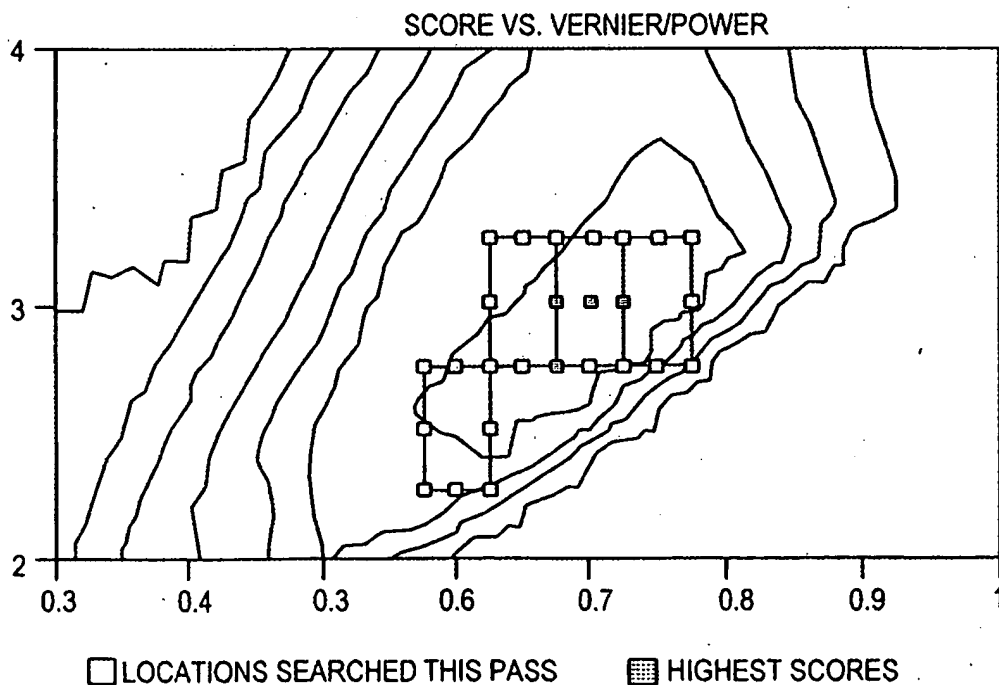


FIG. 16

REPLACEMENT SHEET

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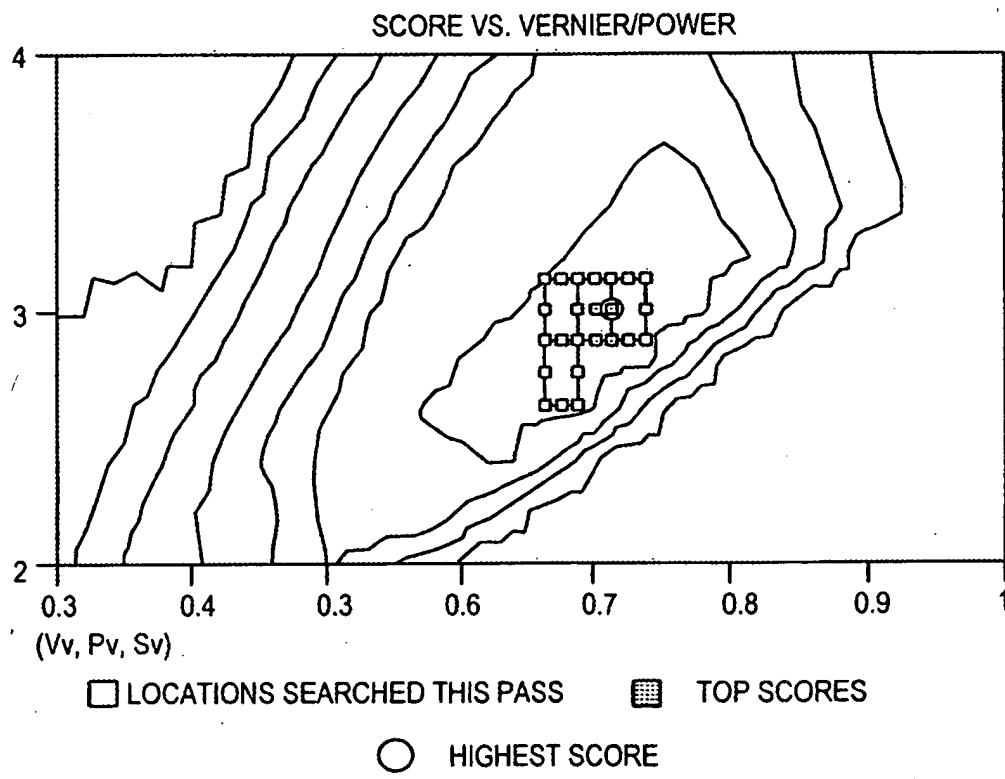


FIG. 17

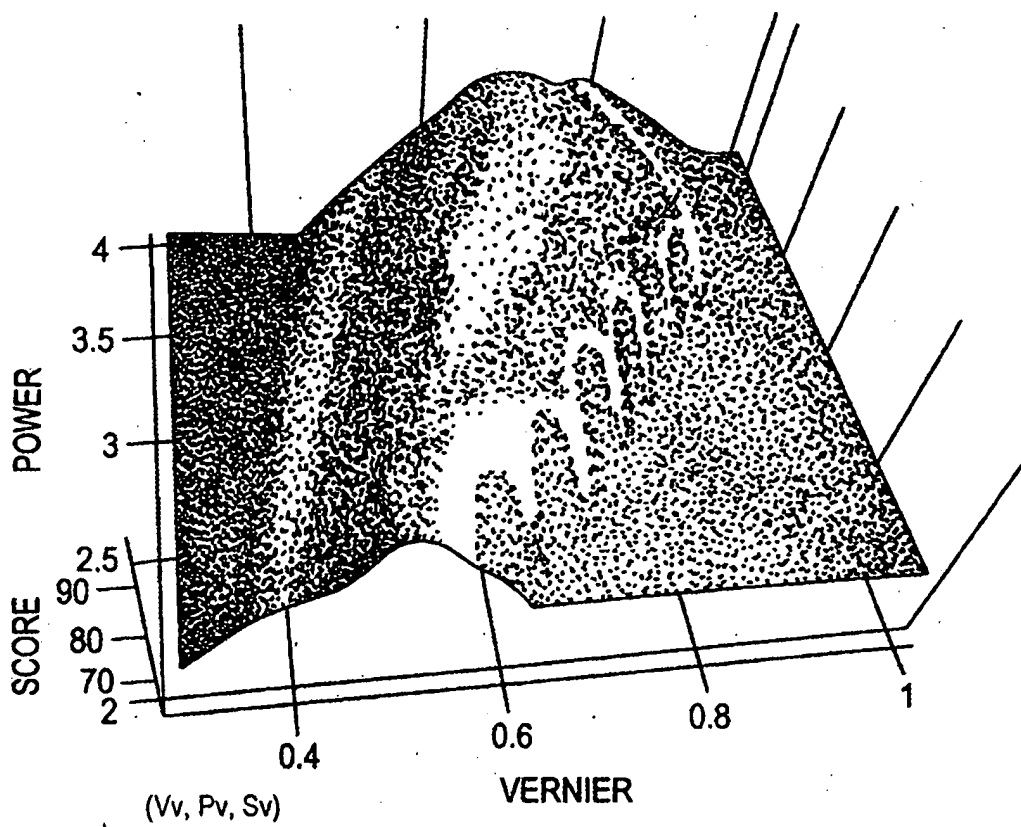


FIG. 18

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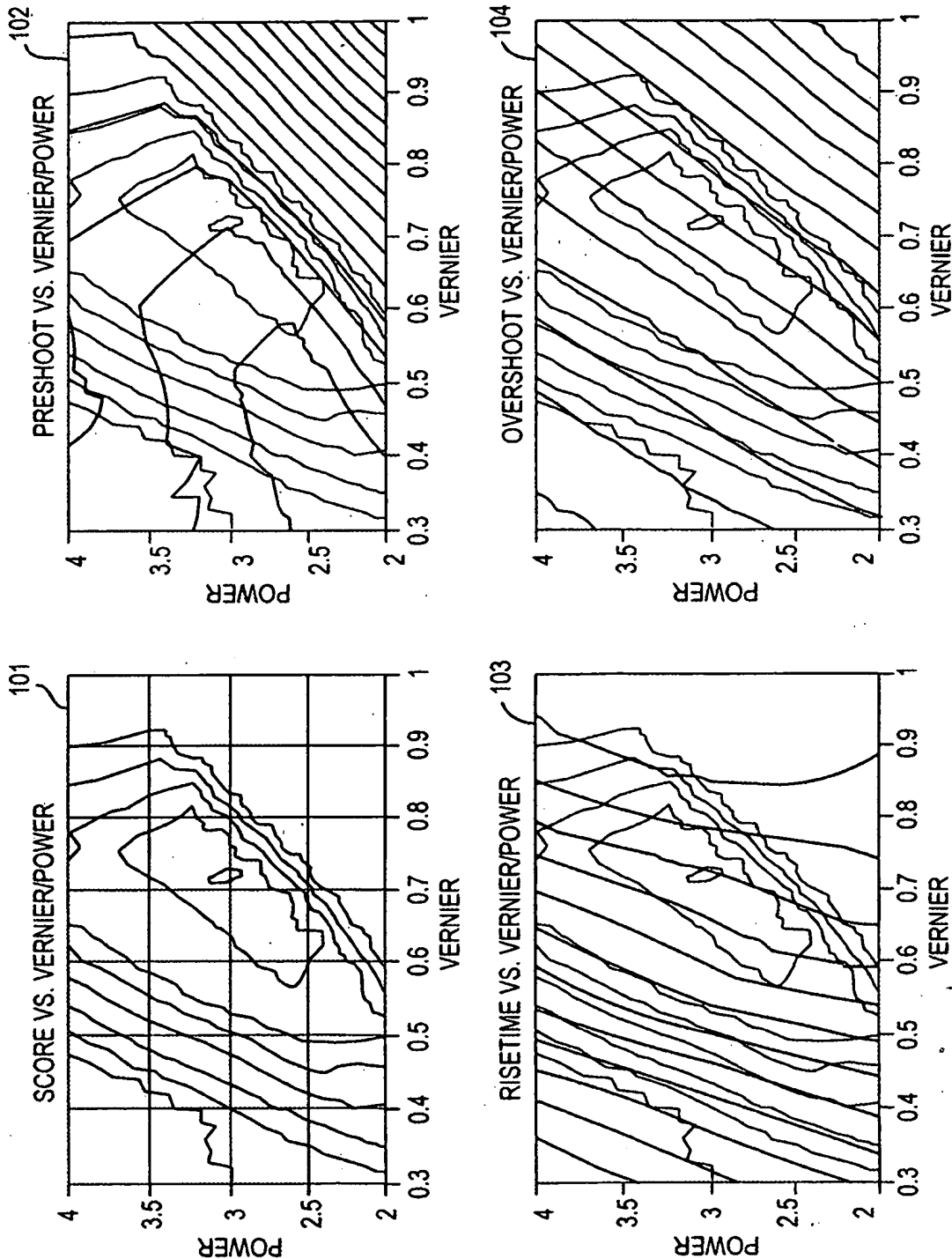


FIG. 19

FIG. 20

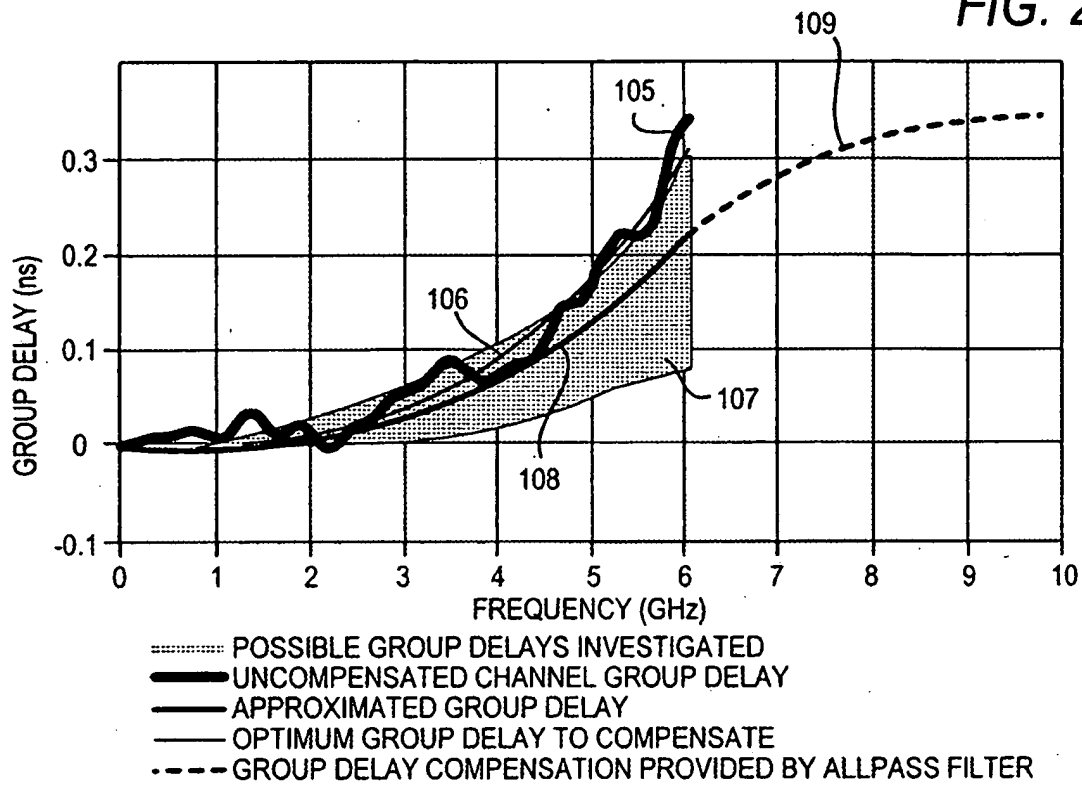


FIG. 21

